

Disclosure Status

Serial Number 09/703,699
Declarations under 1.131
Attachment A
Page 1 of 6

Title: Method and Apparatus For Controlling Data Flow In An IP Network
Disclosure Number: 2000-0020
Managing Attorney: Robert B. Levy

Status: Open **Gov't Contract:** N
Open Date: 01/10/2000 **Type:** Patentability

Close Date:

Deadline Date:

IPRT Team: Network Infrastructure
IPRT Rating: File as resources permit

Completed Date: 01/27/2000*

Results: Rated "2"

Business Unit(s): 5- / Operation & Service Mgmt Div

Inventor Name:	Company:	Department Code:
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Description:

Briefly, the present invention provides a technique for controlling the data flow in an IP network. Within each router is a buffer that determines the source and destination address for each packet. Such data is stored in a memory for receipt through a user interface to an element (e.g., a processor) that sorts the data to determine whether the data received from, or destined for a particular address should be discarded, based on network conditions.

PATENT REVIEW REQUEST FORM for LEGAL OPINION

Please answer the following as completely as possible.

DATE:

SUBJECT: There is a need to control data flow with in an IP network.

OBJECTIVE: Provide a method of controlling data flow to and from a specific location within an IP network. A network management control capability needs to be developed to allow a network manager to stop data flow through a router from or to a specific location (source or destination). This would be considered IPPG (Internet Protocol Packet Gapping).

BRIEF DESCRIPTION: Provide a control where a network manager can detect excessive data flow and place appropriate controls to limit such transmission.

COMPARISON:

1. What is the known prior art, e.g., products/services, patents or printed publications that have a bearing on the patentability of any claim of a particular patent? None that I know of.
2. What are the differences over the prior art? This capability is not provided today.
3. What commercial benefits are derived from these differences? This will provide a process to limit data flow to or from certain locations if they are causing a problem in the network.

USE:

1. What is the probability of commercial use? Great opportunities. By AT&T? It can help differentiate our service from others by providing a way to quickly react and control data flow within the network. By others? This could provide more reliability in a growth service.
2. Is it scheduled for use in an AT&T product or service? We plan on requesting this capability for the AT&T IP network elements. Which one, and when? We would request this from our major router providers. I would expect that CISCO would be one of them.
3. Is this idea likely to be adopted by others? I would expect every Network to want a similar control tool to safeguard against unexpected high levels of

data. If so, to what extent and why? This protects all users from being impacted by a single user.

4. Is it likely to become a standard? It could. It depends if we choose to go in that direction. What are the implications of this? I would rather see this as an advantage for AT&T.
5. Do you see applications for the idea other than the one described above? I would see this as a good feature for the ATM and Frame Relay Network. It provides a way of systematically turning off data flows that could be impacting a network.

PRIORITY RATING:

- Originator's consensus rating. This is a true advantage in the IP world.
- Department Head or Division Manager rating. This is a great advantage for AT&T

BUSINESS UNIT INFORMATION:

- In what Business Unit will the invention be used? IP data services.
- Who is the Business Unit contact person, e.g., product or service manager?
Hossein Eslambolchi

SUBMITTERS: Required information for each inventor/submitter:

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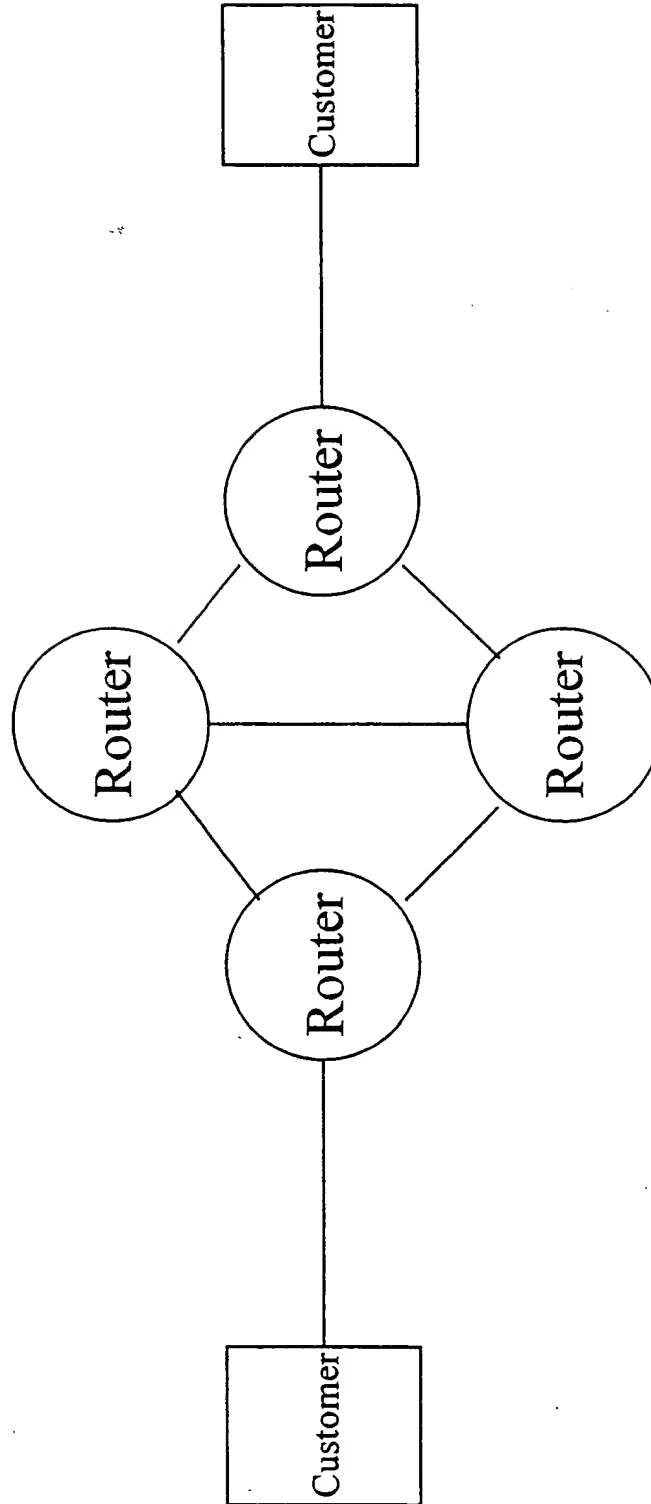
Hossein Eslambolchi

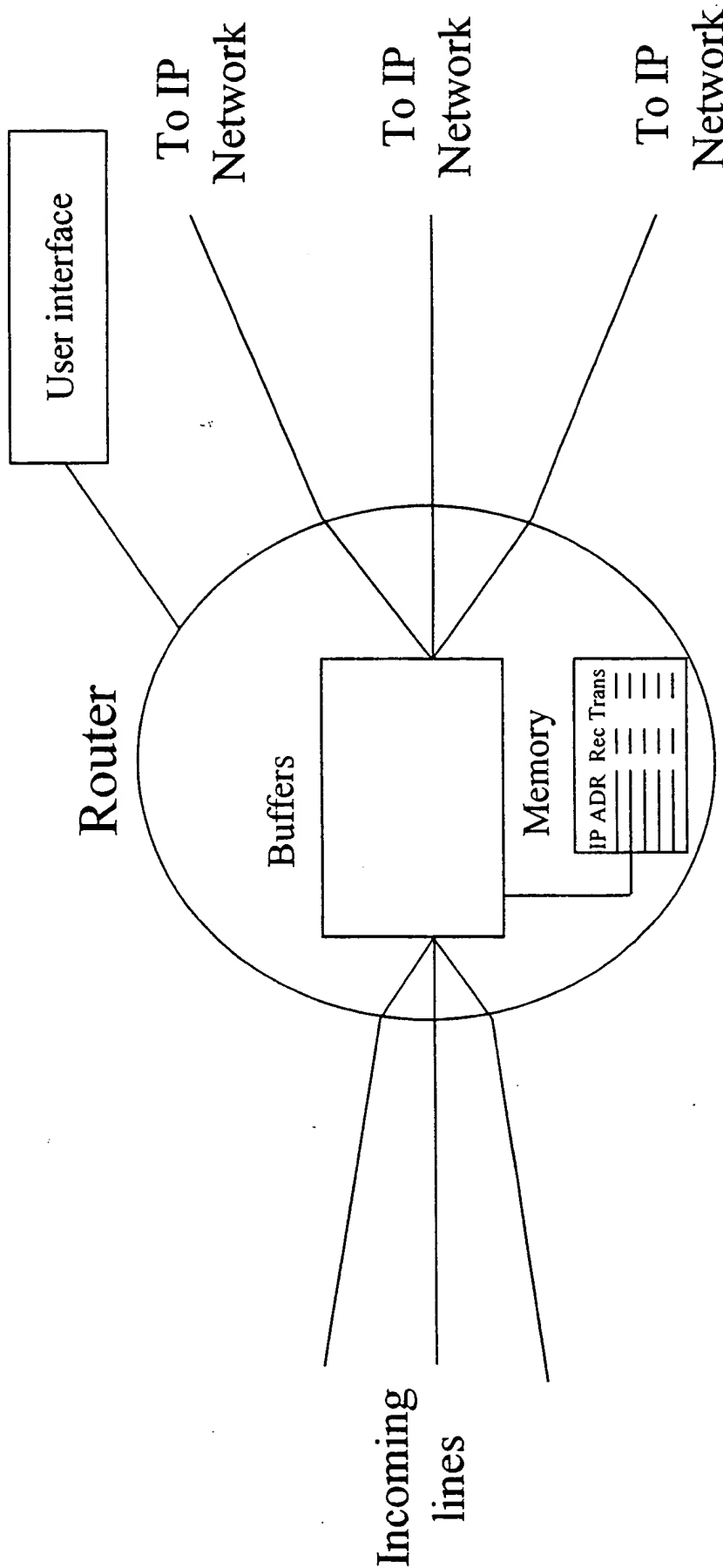
Submitted by: Craig L. De Caluwe Phone: 630-393-5300 Date: 4/8/99

Approved by: _____ Phone: _____ Date: _____

5.

Typical IP Network





The buffers determine the source and destination IP addresses and sends that information to the memory. This information increments a counter for each address in either the receive or sent category for each IP address. This data is then readable by a user through the element user interface. This data is then able to be sorted and provides details on the source and destination of traffic. This can then be used to selectively inhibit transmission to or from a specific address. A router could then be set to discard messages to or from a specific address via the user interface. This would set an address in the buffers that would then be used to determine if a message should be discarded or sent through the network.